

SEQUENCE LISTING

<110> Kosan Biosciences, Inc.
Santi, Daniel
Peck, Larry
Dayem, Linda
Kealey, James

<120> ISOLATED GENE FOR METHYLMALONYL COA EPIMERASE AND USES THEREOF

<130> 30062-20049.10

<140> To be Assigned

<141> Herewith

<150> US 09/699,136

<151> 2000-10-27

<150> US 60/161,414

<151> 1999-10-25

<150> US 60/161,703

<151> 1999-10-27

<150> US 60/206,082

<151> 2000-05-18

<160> 2

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 447

<212> DNA

<213> Artificial Sequence

<220>

<223> Isolated and recombinant form of the full
epimerase gene sequence

<221> CDS

<222> (1)...(444)

<400> 1

atg	agt	aat	gag	gat	ctt	ttc	atc	tgt	atc	gat	cac	gtg	gca	tat	gcg	48
Met	Ser	Asn	Glu	Asp	Leu	Phe	Ile	Cys	Ile	Asp	His	Val	Ala	Tyr	Ala	
1				5					10					15		

tgc	ccc	gac	gcc	gac	gag	gct	tcc	aag	tac	tac	cag	gag	acc	ttc	ggc	96
Cys	Pro	Asp	Ala	Asp	Glu	Ala	Ser	Lys	Tyr	Tyr	Gln	Glu	Thr	Phe	Gly	
			20					25					30			

tgg	cat	gag	ctc	cac	cgc	gag	gag	aac	ccg	gag	cag	gga	gtc	gtc	gag	144
Trp	His	Glu	Leu	His	Arg	Glu	Glu	Asn	Pro	Glu	Gln	Gly	Val	Val	Glu	
			35				40					45				

106220 20424660

atc atg atg gcc ccg gct gcg aag ctg acc gag cac atg acc cag gtt 192
 Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
 50 55 60
 cag gtc atg gcc ccg ctc aac gac gag tcg acc gtt gcc aag tgg ctt 240
 Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
 65 70 75 80
 gcc aag cac aat ggt cgc gcc gga ctg cac cac atg gca tgg cgt gtc 288
 Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
 85 90 95
 gat gac atc gac gcc gtc agc gcc acc ctg cgc gag cgc ggc gtg cag 336
 Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
 100 105 110
 ctg ctg tat gac gag ccc aag ctc ggc acc ggc ggc aac cgc atc aac 384
 Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
 115 120 125
 ttc atg cat ccc aag tcg ggc aag ggc gtg ctc atc gag ctc acc cag 432
 Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln
 130 135 140
 tac ccg aag aac tga 447
 Tyr Pro Lys Asn
 145

<210> 2
 <211> 148
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Deduced amino acid sequence of the epimerase gene
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<400> 2
 Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala
 1 5 10 15
 Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly
 20 25 30
 Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu
 35 40 45
 Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
 50 55 60
 Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
 65 70 75 80
 Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
 85 90 95
 Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
 100 105 110
 Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
 115 120 125
 Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln

130
Tyr Pro Lys Asn
145

135

140

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